

**ARIZONA GAME AND FISH DEPARTMENT  
HERITAGE DATA MANAGEMENT SYSTEM**

**Plant Abstract**

**Element Code:** PDFAB0FB70

**Data Sensitivity:** No

**CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE**

**NAME:** *Astragalus nutriosensis*

**COMMON NAME:** Nutrioso Milk Vetch

**SYNONYMS:**

**FAMILY:** Fabaceae (Leguminosae)

**AUTHOR, PLACE OF PUBLICATION:** Sanderson, M. 1988. Madrono 35(4):325-329.

**TYPE LOCALITY:** Apache County, on hillside northeast of intersection of Highway AZ 666 and Apache County Highway 116. Sanderson, May 1987.

**TYPE SPECIMEN:** Holotype: ARIZ. Sanderson, M. 551. 25 May 1987.

**TAXONOMIC UNIQUENESS:**

**DESCRIPTION:** **Dwarf, acaulescent** (no stems, laying flat on the ground), 3.5-7.5 cm (1.4-3.0 in.) tall, 7.0-10.0 cm (2.8-4.0 in.) wide; perennial herb from a short but broad, knotty caudex on a simple taproot. Leaves are pinnately compound, 3.0-11.0 cm (1.2-4.4 in.) long, petiole making up half that length. There are 5-9 pairs of small leaflets (4.0-8.0 mm [0.16-0.32 in.] long), glabrescent-green above. Herbage (except for the tops of leaflets) cinereous (ash grey) and covered with spreading hairs. **Inflorescence (a raceme) does not ascend above the leaves**, being nested in the base of the plant, and **bears 2-5 flowers** that point upward. Petals are white with pink-purple veins and/or tips. Banner is 2.0-2.3 cm (0.8-0.92 in.) long and 0.6 cm (0.24 in.) wide and **barely recurved**. The wings are 1.9-2.2 cm (0.76-0.88 in.) long; keel usually shorter than wings. Pods are **short** (0.8-1.0 cm [0.32-0.4 in.] long), **broad, a little incurved, terete in cross-section, completely bilocular, and papery in texture**. Fruit very small, beaked, a little incurved, terete in cross-section, completely bilocular, and papery in texture; dehiscence by fracture of pod into two closed, carpel-like halves.

**AIDS TO IDENTIFICATION:** Dwarf; acaulescent; inflorescence almost sessile with few (2-5) flowers. Positive identification requires flowers, fruit and vegetation.

**ILLUSTRATIONS:** Madroño (1988) 35(4):326.

**TOTAL RANGE:** Eastern Arizona, Apache County. As of 1991 known only from two localities along Nutrioso Creek between Springerville and the town of Nutrioso.

**RANGE WITHIN ARIZONA:** See "Total Range."

## **SPECIES BIOLOGY AND POPULATION TRENDS**

**GROWTH FORM:** Herbaceous Perennial

**PHENOLOGY:** Flowers late-April to May; fruits by late-May to June.

**BIOLOGY:**

**HABITAT:** Mesa tops.

**ELEVATION:** 7,190 - 7,780 ft. (2193 - 2373 m)

**EXPOSURE:**

**SUBSTRATE:** Volcanic silty-clay on gently sloping hillsides.

**PLANT COMMUNITY:** Open grassland, sometimes among pinyon and juniper on slopes. Associated with *Bouteloua gracilis* and *Gutierrezia sarothrae*. Sympatric with *Oxytropis lambertii*, *Astragalus humistratus*, *A. brandegei* and *A. mollissimus* var. *matthewsii* (Sanderson 1988).

**POPULATION TRENDS:** Apparently subject to water stress. Population size appears to be related to spring moisture, at least in part.

## **SPECIES PROTECTION AND CONSERVATION**

<b>ENDANGERED SPECIES ACT STATUS:</b>	None (USDI, FWS 1996) [C2 USDI, FWS 1993]
<b>STATE STATUS:</b>	Salvage Restricted (ADA 1993)
<b>OTHER STATUS:</b>	Not Forest Service Sensitive (USDA, FS Region 3, 1999) [Forest Service Sensitive, USDA FS Region 3, 1990]

**MANAGEMENT FACTORS:** Extremely limited distribution. Not palatable to livestock.

**CONSERVATION MEASURES TAKEN:** Monitoring plots established by Pat Gallagher and USFS in 1990 and 1991.

**SUGGESTED PROJECTS:** Status surveys.

**LAND MANAGEMENT/OWNERSHIP:** USFS - Apache-Sitgreaves National Forest; State Land Department; Private.

## **SOURCES OF FURTHER INFORMATION**

### **LITERATURE CITATIONS:**

- Arizona Department of Agriculture. 1993. Plant Services Division. Appendix A. p. 8.  
Sanderson, M.J. 1988. *Astragalus nutriosensis* (Fabaceae): A new species from eastern Arizona. Madrono 35(4):325-329.  
USDA, Forest Service Region 3. 1990. Sensitive Plant List. p. 16.  
USDA, Forest Service Region 3. 1999. Regional Forester's Sensitive Species List.  
USDI, Fish and Wildlife Service. 1993. Plant Taxa for Listing as Endangered or Threatened Species; Notice of Review. Federal Register 58(188):51153.  
USDI, Fish and Wildlife Service. 1996. Endangered and Threatened Wildlife and Plants: Review of Plant and Animal Taxa That Are Candidates for Listing as Endangered or Threatened Species; Notice of Review. Proposed Rule. Federal Register 61(40):7595-7613.

### **MAJOR KNOWLEDGEABLE INDIVIDUALS:**

- Renee Galeano-Popp - USFS Botanist, Lincoln National Forest, Alamogordo, New Mexico.  
Pat Gallagher - Nutrioso, Arizona.  
M.J. Sanderson - New York.

### **ADDITIONAL INFORMATION:**

Seasonally strong winds on mesa tops may influence prostrate growth form.

<b>Revised:</b>	1990-10-16 (SR)
	1991-10-18 (BKP)
	1992-09-14 (BKP)
	1997-07-21 (SMS)

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